PROPELLER VISUAL TECHNICAL INSPECTION REPORT

TYPE OF INSPECTION:

PREREPAIR [ ] POST REPAIR/MANUFACTURE [ ] IN-SERVICE [ ] PRESERVATION DAMAGE [ ]

IDENTIFICATION DATA (STAMPED ON HUB/PALM)

SERIAL NO.	SHIP CLASS	STOCK NO.

DRAWING NO.	DRAWING REVISION: HUB/PALM _____ DWG _____

MONOBLOC [ ] CPP [ ]	RH [ ] LH [ ]

PORT [ ] STBD [ ] INBD [ ] OUTBD [ ] CENTER [ ]

NO. OF BLADES	MATERIAL

INSPECTION

INSPECTING ACTIVITY	LOCATION OF INSPECTION (ACTIVITY)

PROPELLER IS INSTALLED? YES [ ] NO [ ]	SHIP (INCLUDE HULL NUMBER - IF APPLICABLE)

PT AIDED VISUAL INSPECTION? YES [ ] NO [ ]	UNDERWATER VISUAL INSPECTION? YES [ ] NO [ ]

PRINTED NAME AND TITLE OF QUALIFIED INSPECTOR	TELEPHONE NUMBER

SIGNATURE	DATE OF INSPECTION

REVIEWED BY (SEE NOTE 6)	DATE

INSTRUCTIONS

1. Use this form by placing a check mark in the appropriate column -- YES, NO, or NA (not applicable).
2. Answer all questions. Use additional comments block if more space is needed.
3. If an answer indicates the possibility of an unsatisfactory propeller, explain in the REMARKS column.
4. Show the approximate size and location of all defects and damage on the appropriate sketch.
5. Identify damaged areas as old or new, if possible.
6. Government verification in contractor facility. Independent reviewer in government facility. Signature must be on all distribution copies.

DISTRIBUTION:

One copy to NSWCCD-SSES 9323, NAVICP 05824, Contracting Officer, & File

Other:

ITEM	YES	NO	NA	REMARKS
1. Preservation and Storage				
a. Is the propeller stored in open covered storage or better?				
b. Is the propeller stored on blocks or skids?				
c. Is this inspection being accomplished due to an unsatisfactory visual preservation inspection? (If yes, attach a copy.)				
1. Has any preservation damage been repaired or tagged for future reference?				
2. Propeller Accessories				
a. Are the following accessories installed or accompanying this propeller?				
1. Gland ring				
2. Eyebolts				
3. Eyebolt hole plugs				
4. Fill and vent hole plugs				
5. Gland/Cap studs and nuts				
b. Are installed eyebolt hole and fill and vent hole plugs flush with the adjacent surface?				
3. PRAIRIE Air System				
a. Are all the air-emitting holes open?				
b. Are the air channel cover plate welds free of cracks?				
c. Are the PRAIRIE air inlet holes free of damage or deficiencies?				
d. Do the PRAIRIE air inlet hole seal surfaces have a surface finish of 32 Ra or better?				
4. Blade Edges				
a. Does the latest revision of the propeller drawing specify a:				
Knuckle [ ] Fairing Radius [ ]				
b. Does the propeller have a:				
Knuckle [ ] Fairing Radius [ ]				
1. Is the break of the knuckle sharp on all blades?				
2. Is the break of the knuckle free of defects?				

PROPELLER SERIAL NO.:_____ PAGE 2 OF _____

ITEM	YES	NO	NA	REMARKS
c. Does the latest revision of the propeller drawing specify a trailing edge radius of 1/64"?				
1. Do the trailing edges have an edge radius of approximately 1/64"?				
2. Is the trailing edge radius free of defects?				
d. Are the blade edges (first and last 10% of width) free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
e. For Class 1 propellers, are the blade edges free of porosity, which exceeds 0.010 inches in a one inch band from the fillet to the 0.975R, LE and TE?				
f. Are the blade edges (first and last 10% of width) free of damage and deficiencies (e.g., nicks, dents, bends, cable marks, flat spots, ridges, punch marks, gouges, etc.)?				
g. Are the blade edges (first and last 10% of width) free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
h. Are the leading and trailing edge outlines fair (not wavy)?				
i. Are the blade trailing edges free of curling?				
j. Are the blade edges free of punch marks within the first and last 10% of the blade width?				
5. Blade Tips				
a. Does the latest revision of the propeller drawing specify a:				
Knuckle [ ] Fairing Radius [ ]				
b. Does the propeller have a:				
Knuckle [ ] Fairing Radius [ ]				
1. Is the break of the knuckle sharp on all blades?				
2. Is the break of the knuckle free of defects?				

PROPELLER SERIAL NO.:_____ PAGE 3 OF _____

ITEM	YES	NO	NA	REMARKS
c. Does the latest revision of the propeller drawing specify that the tips have an edge radius of 1/64"?				
1. Do the tips have an edge radius of approximately 1/64"?				
2. Is the tip edge radius free of defects?				
d. Are the tip regions free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
e. For Class 1 propellers, are the tip regions free of porosity, which exceeds 0.010 inches in a 1-1/2 inch band from the LE 0.975R to the TE 0.975R?				
f. Are the tip regions free of damage and deficiencies (e.g., nicks, dents, bends, cable marks, flat spots, ridges, punch marks, gouges, etc.)?				
g. Are the tip outlines fair (not wavy)?				
h. Are the blade tip regions free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
i. Does the propeller have bolt on blade tips?				
1. Is the tip cover plate flush with the tip surface?				
2. Are the cover plate screws present and flush with the cover plate?				
3. Is there a visible gap between the tip and the blade casting?				
4. Is the transition between the tip and blade casting smooth and fair (e.g.; no tip displacement)?				
6. Blade Surfaces				
a. Are the blade surfaces free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
b. Are the blade surfaces free of damage and deficiencies (e.g., dents, gouges, cable marks, etc.)?				
c. Are the blade surfaces free of cavitation erosion?				

ITEM	YES	NO	NA	REMARKS
d. Are the blade surfaces fair (not wavy)?				
e. Are the blade surfaces free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
f. Are the blade surfaces free of punch marks and scribe lines, which exceed 0.030 inches in width or depth?				
7. Fillet Areas				
a. Are the fillet areas free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
b. Are the fillet areas free of damage and deficiencies (e.g., dents, gouges, ridges, cable marks, etc.)?				
c. Are the fillet areas free of cavitation erosion?				
d. Are the fillets fair (not wavy)?				
e. Are the fillet areas free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
8. Hub				
a. Is the hub free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
b. Is the hub exterior surface free of damage and deficiencies, (e.g., dents, gouges, cable marks, etc.)				
c. Is the hub exterior free of cavitation erosion?				
d. Is the hub exterior fair (not wavy)?				
e. Is the hub exterior free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
f. Is the gland seal area at forward end of the hub bore free of damage, deficiencies (e.g., gouges, scoring, etc.) and porosity greater than 0.030 inches?				
g. Is the O-ring sealing surface on the hub aft face free of damage, deficiencies, and porosity greater than 0.030 inches?				

ITEM	YES	NO	NA	REMARKS
h. Are the keyway(s) free of damage and deficiencies (e.g., nicks, dents, etc.)?				
i. Is the hub interior surface free of damage and deficiencies (e.g., dents, gouges, cable marks, raised metal)?				
j. Is the hub interior free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
k. Are the fill and vent passages clear of obstructions?				
9. Controllable Pitch Propeller Palm				
a. Are the palm top faces free of damage or deficiencies (e.g., gouges, dings, dents, etc.)?				
b. Are the palm bolt holes free of damage or deficiencies (e.g., gouges, dings, dents, etc.)?				
c. Are the palm bottoms free of damage or deficiencies (e.g., gouges, dings, dents, etc.)?				
d. Are the palm dowel pin holes free of damage or deficiencies (e.g., gouges, scoring, dings, dents, etc.)?				
e. Are the palms free of cracks? (Identify location of cracks as being in welded or unwelded areas.)				
f. Are the palms free of porosity? (Identify location of porosity as being in welded or unwelded areas.)				
g. Are the palm O-ring sealing surfaces free of damage, deficiencies, and porosity greater than 0.030 inches?				
10. Is the propeller free of marine growth?				
11. Surface Finish				
a. Is the hub O.D. surface 125 Ra or better?				
b. Are the blade surfaces 63 Ra or better? (for Class I & II propellers)				
c. Are the blade surfaces 125 Ra or better? (for Class III & IV propellers)				
d. Are the O-ring sealing surfaces 32 Ra or better?				

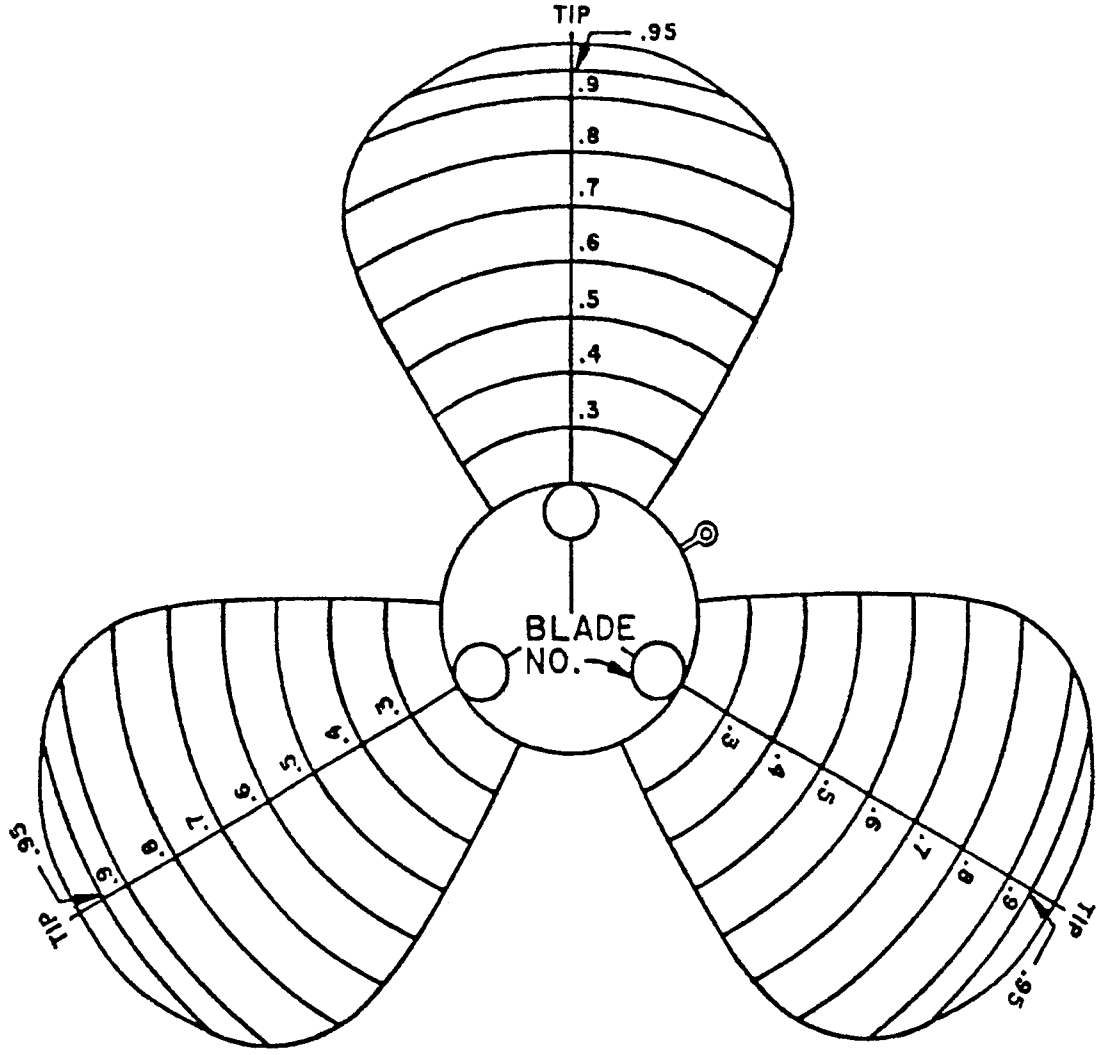
PROPELLER SERIAL NO.:_____ PAGE 6 OF _____

ITEM	YES	NO	NA	REMARKS
12. Are the approximate size and location of all defects and damage shown on the attached sketches?				
13. For new manufacture or new weld repair areas, does the propeller meet MIL-STD-2035 acceptance criteria?				
14. Does the condition of this propeller indicate that it will provide satisfactory service?				

15. Provide a brief description of the repairs considered necessary to restore this propeller to a serviceable condition.

16. Hub/Palm Stamped Data (Exactly as stamped.)

17. Additional Comments. (Use additional sheets, if necessary)



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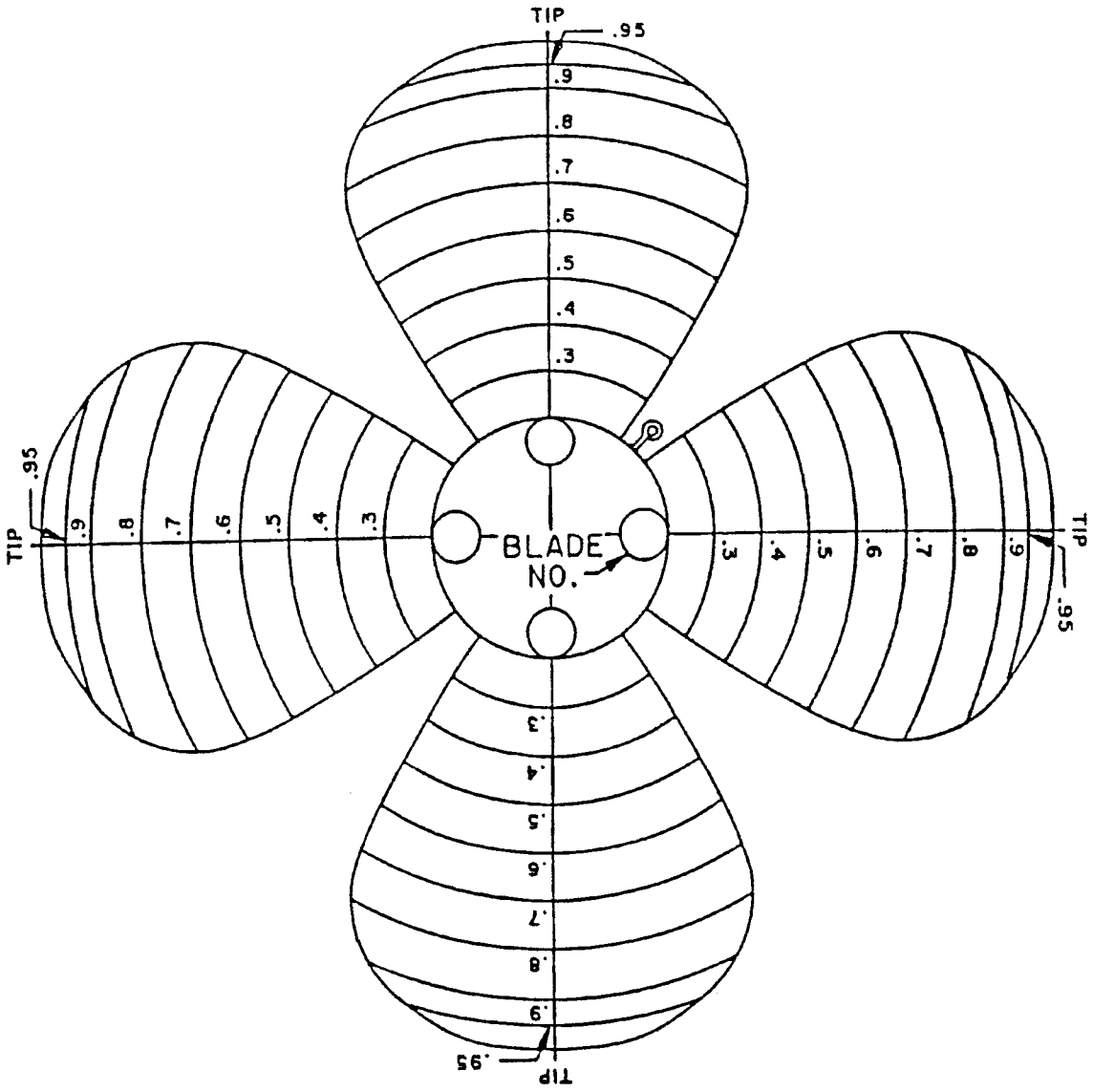

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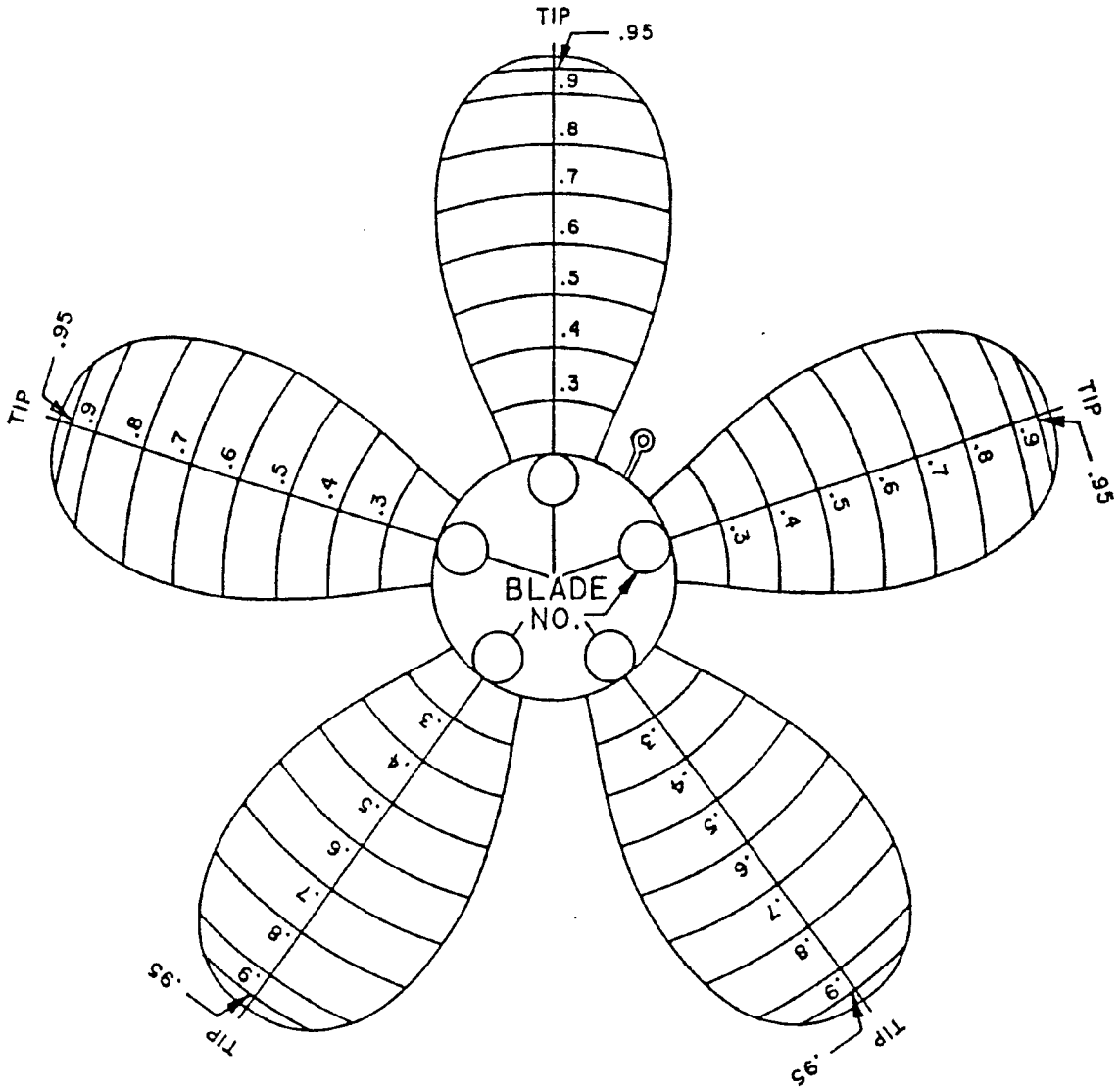

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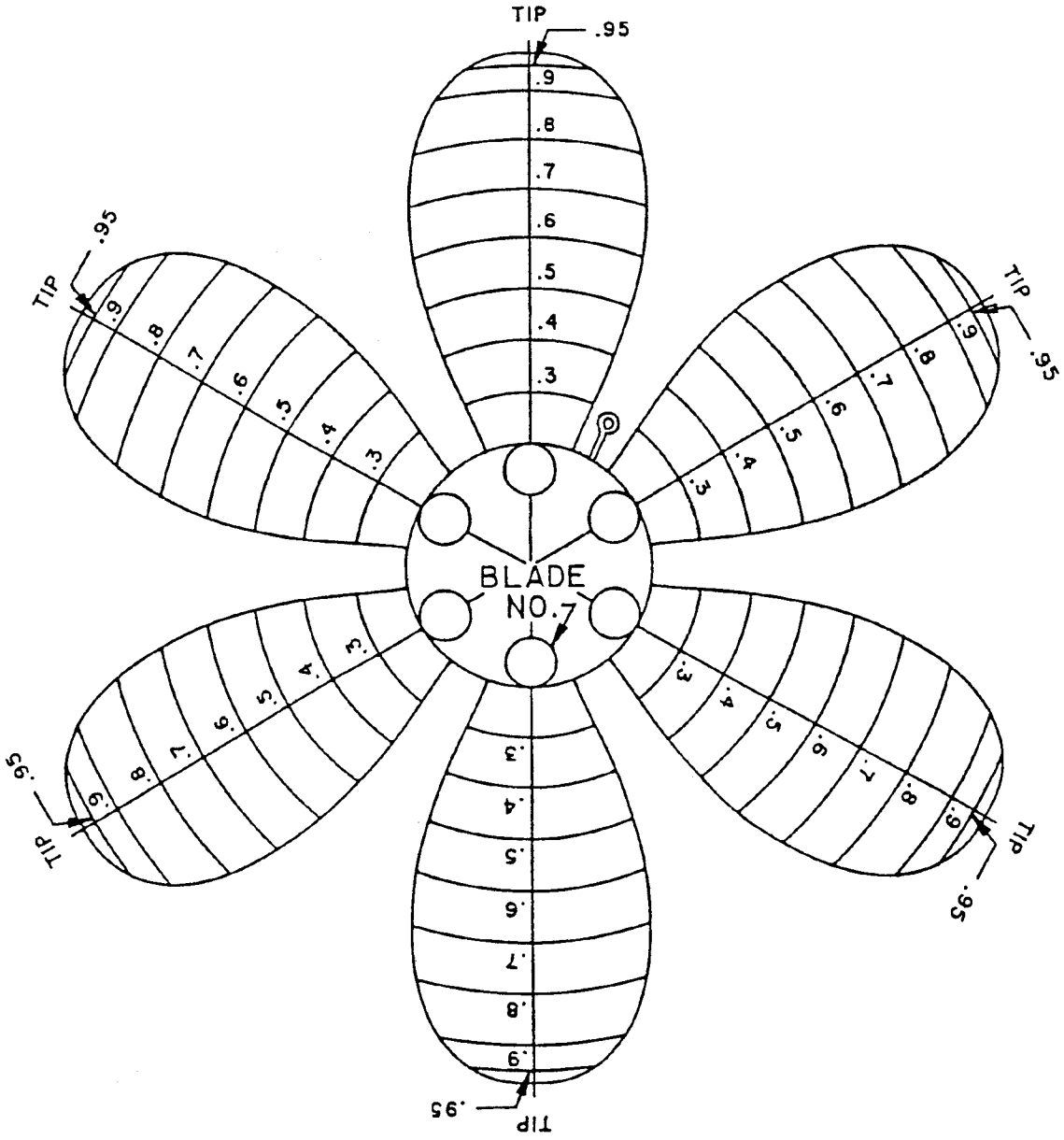

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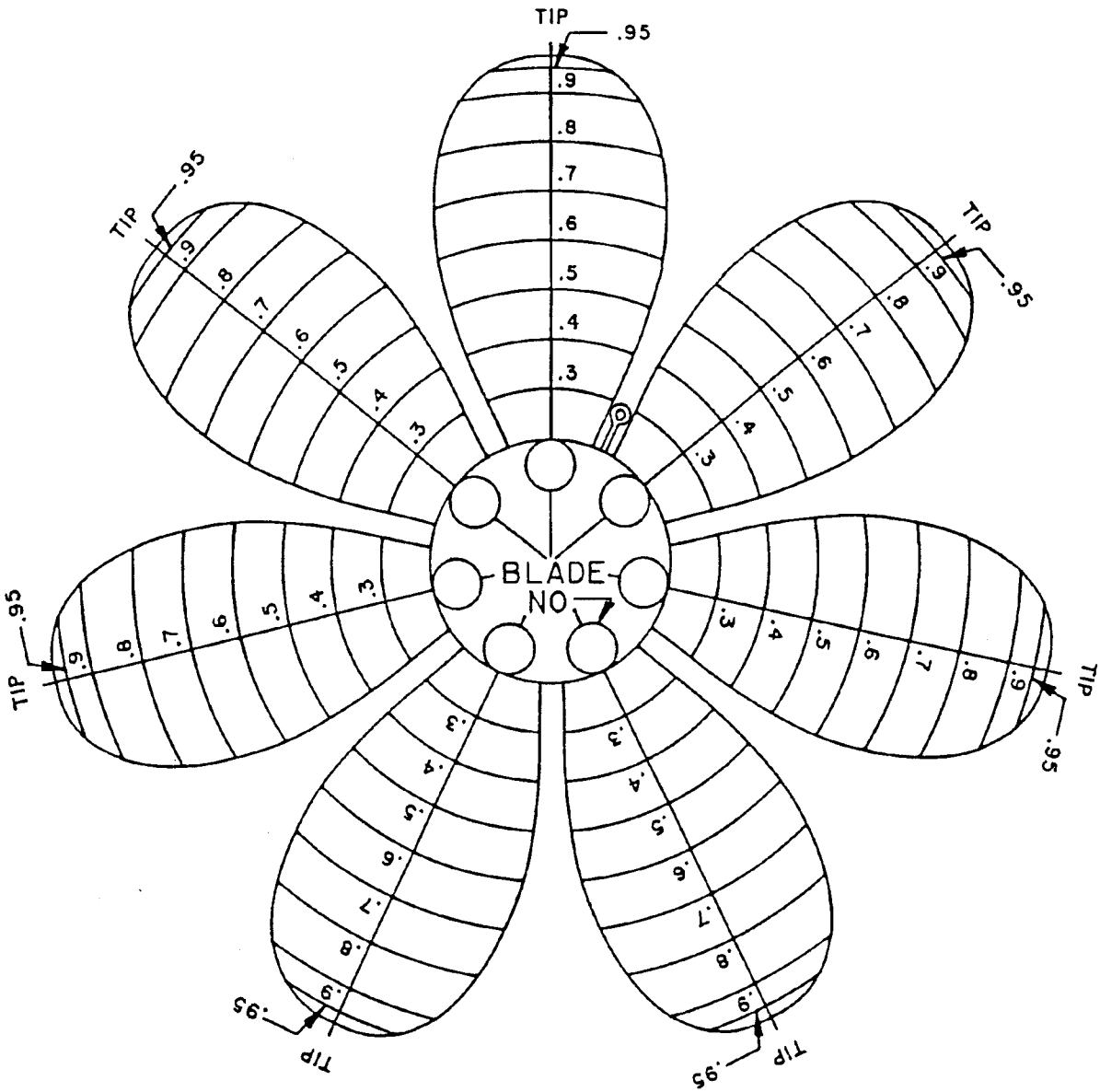

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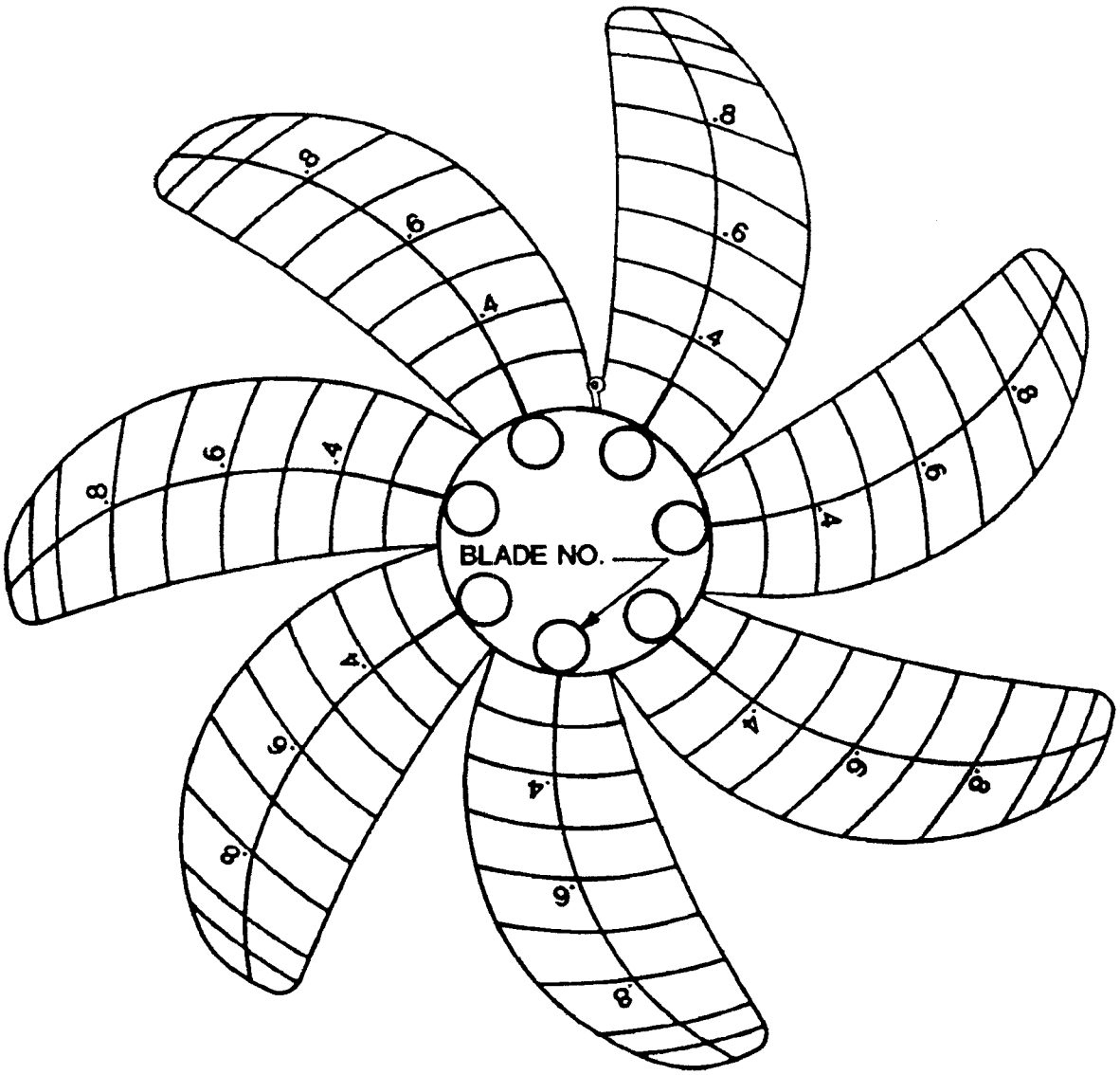

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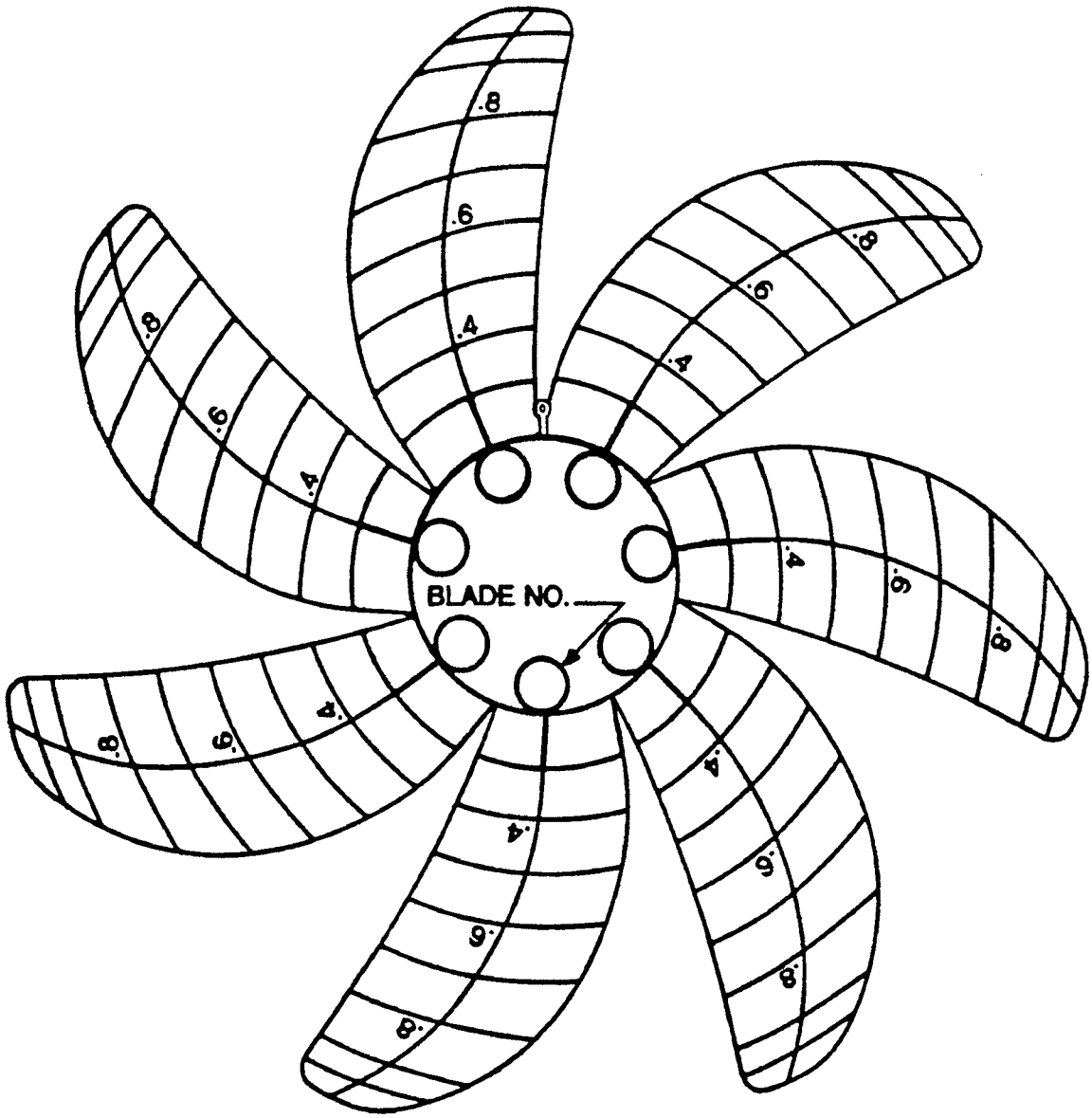

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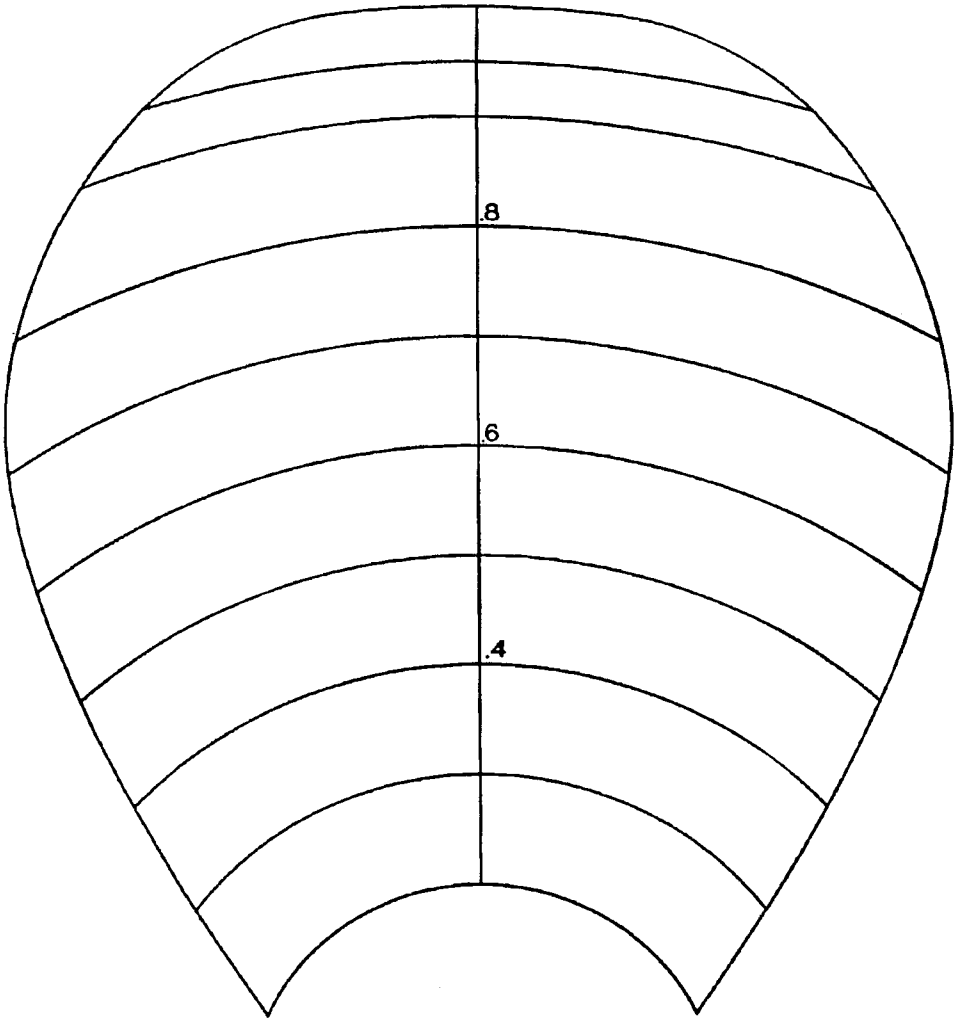

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BLADE NO. _____

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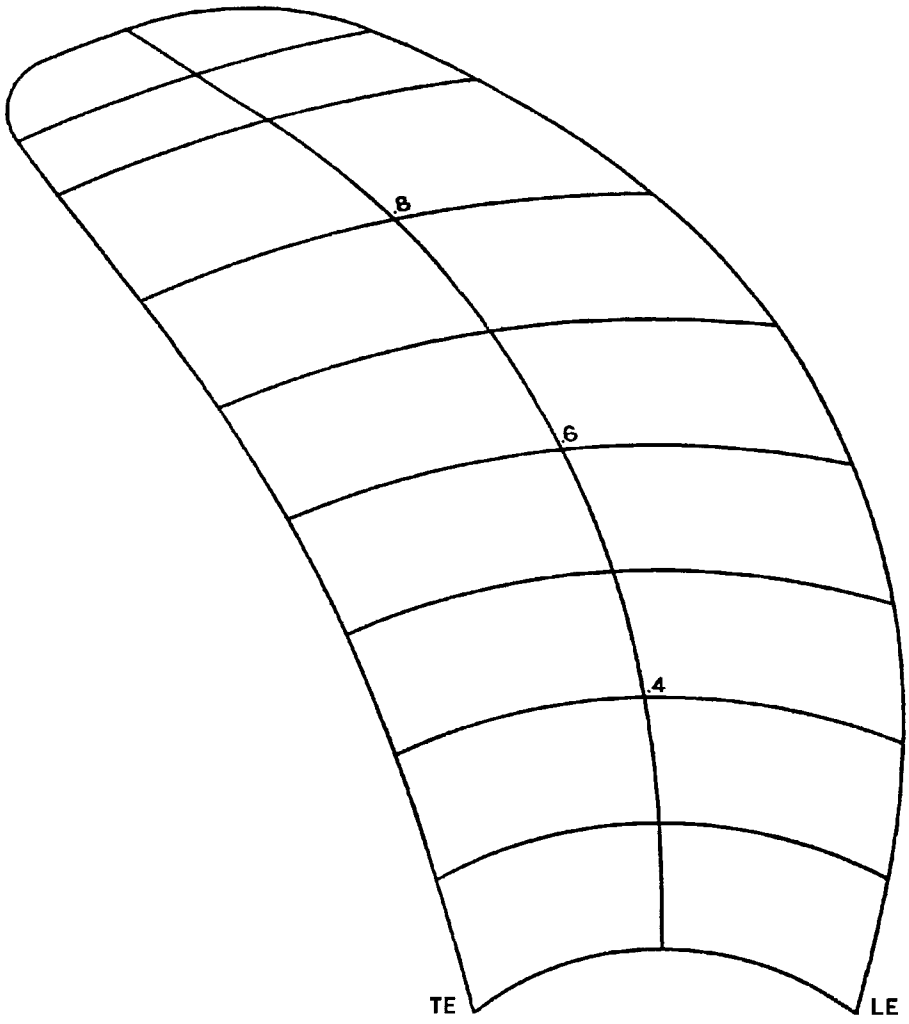

BLADE NO. _____

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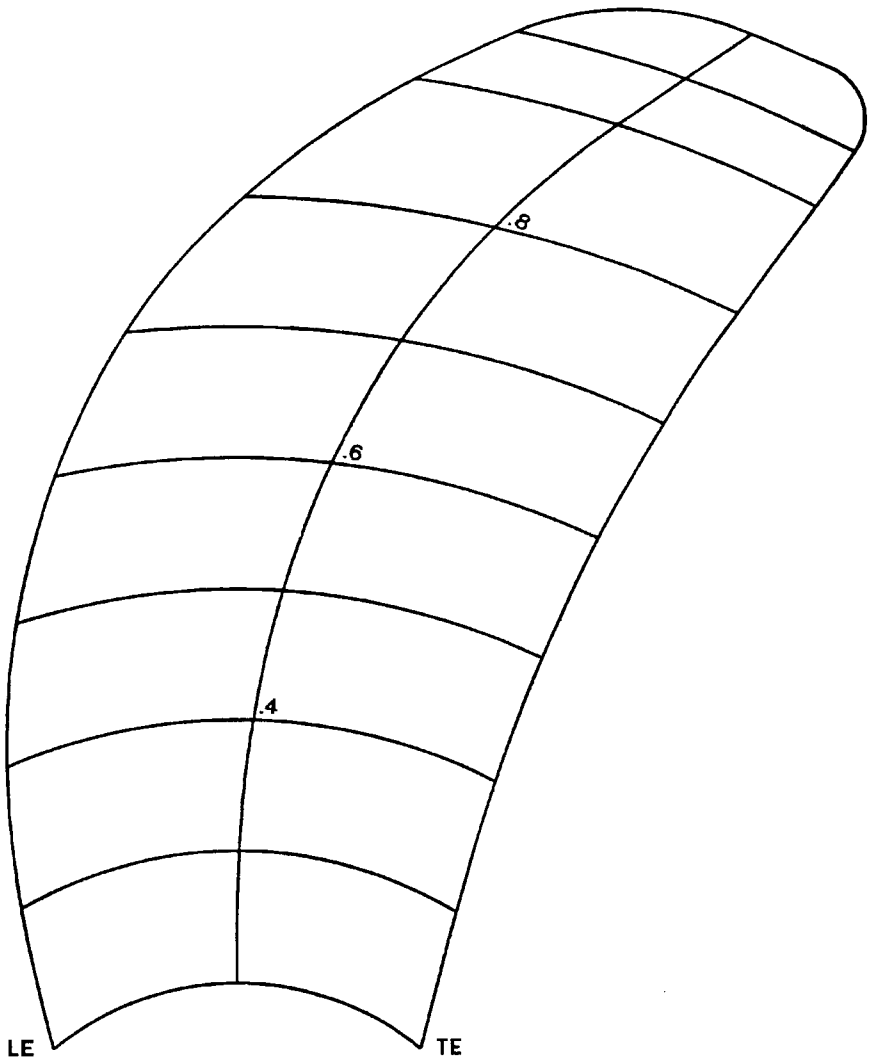

BLADE NO. _____

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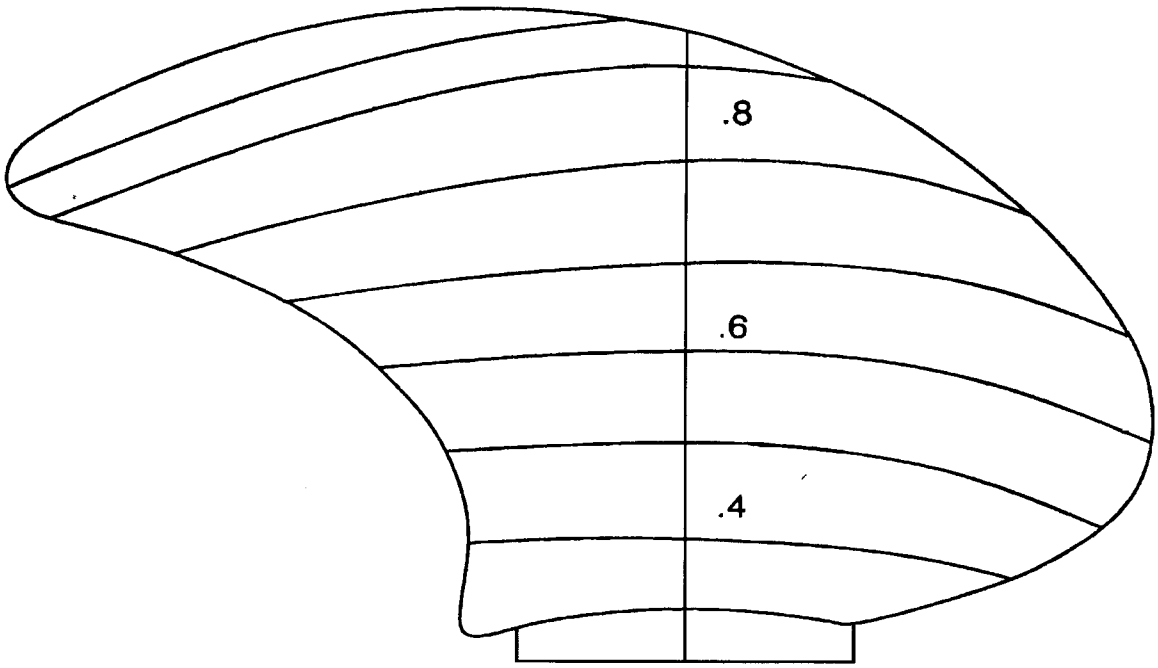
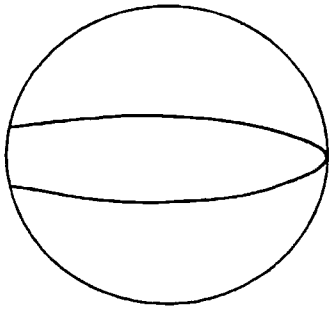
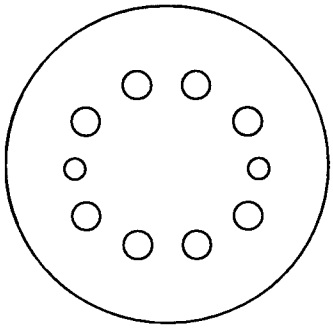


BLADE NO. _____

HEAT NO. _____

- ☐ LEFT HAND
- ☐ RIGHT HAND
- ☐ SUCTION FACE
- ☐ PRESSURE FACE





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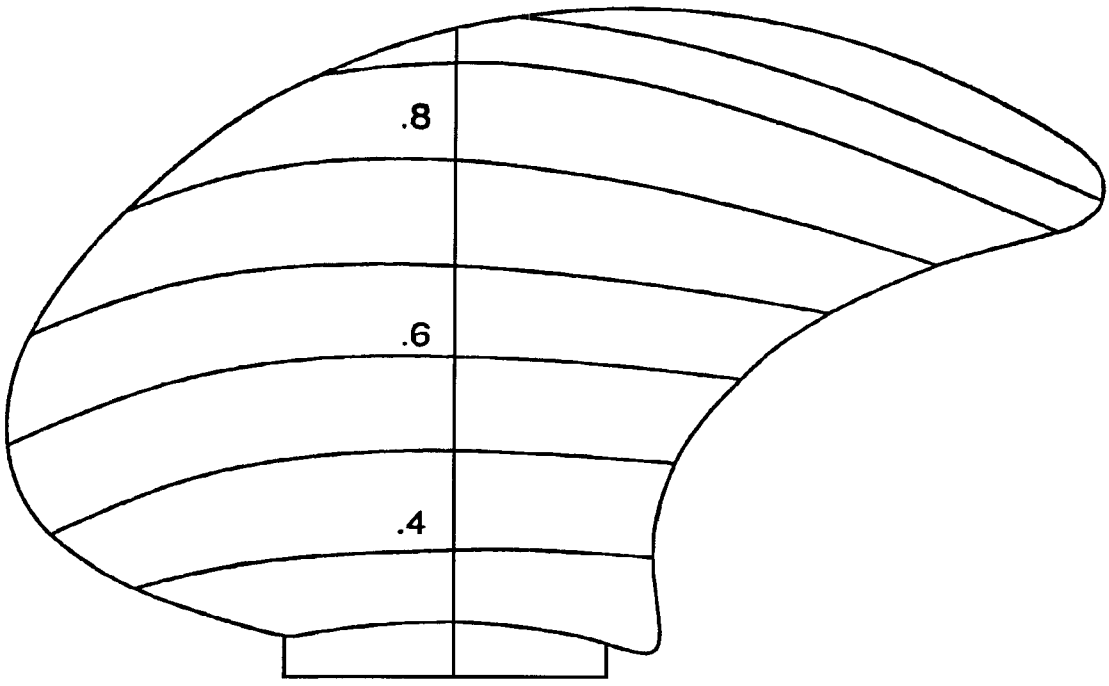

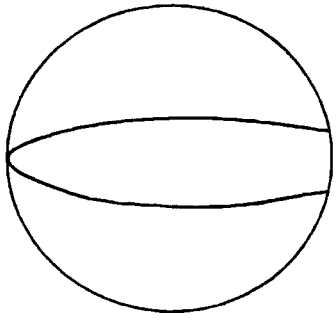

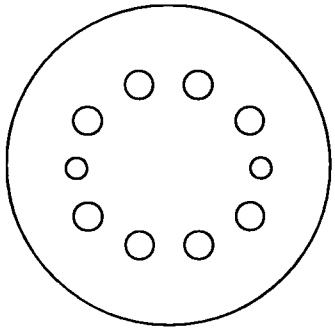

BLADE NO. _____

HEAT NO. _____

- ☐ LEFT HAND
- ☐ RIGHT HAND
- ☐ SUCTION FACE
- ☐ PRESSURE FACE

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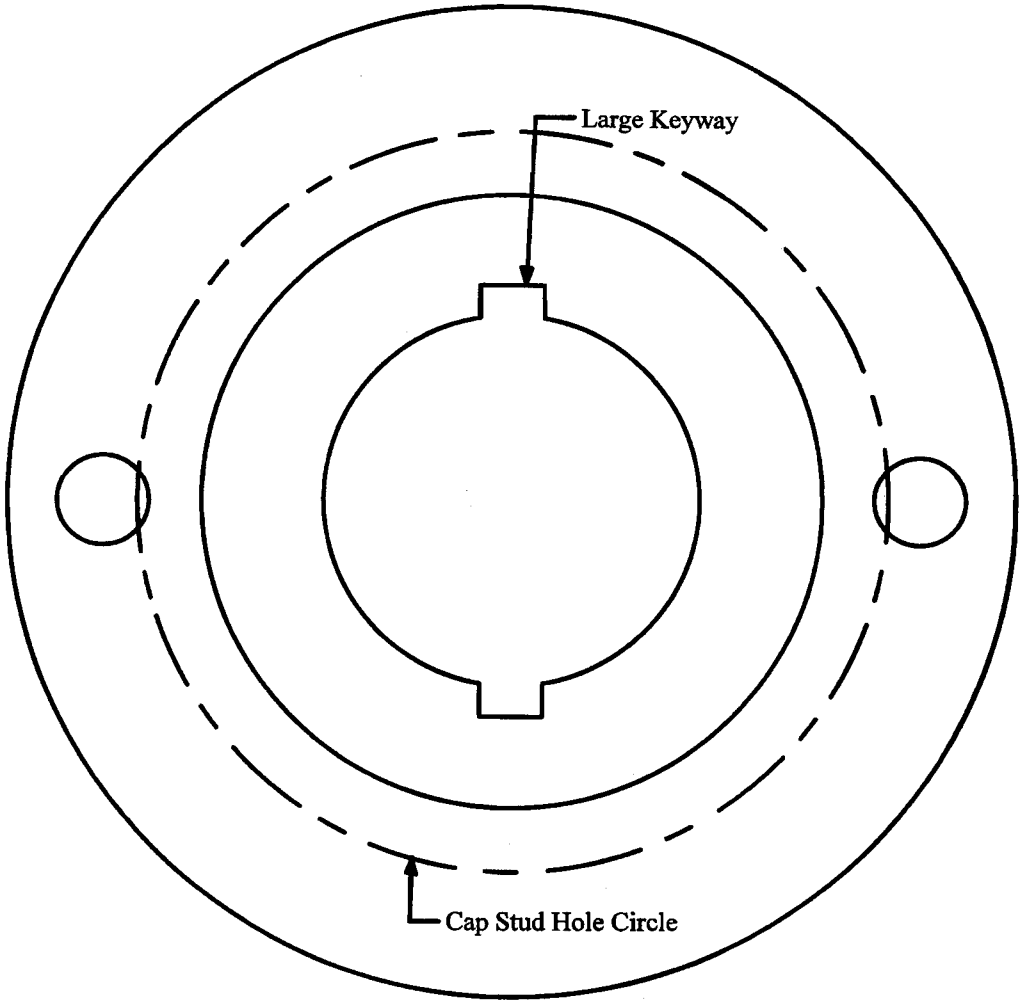
AFT FACE



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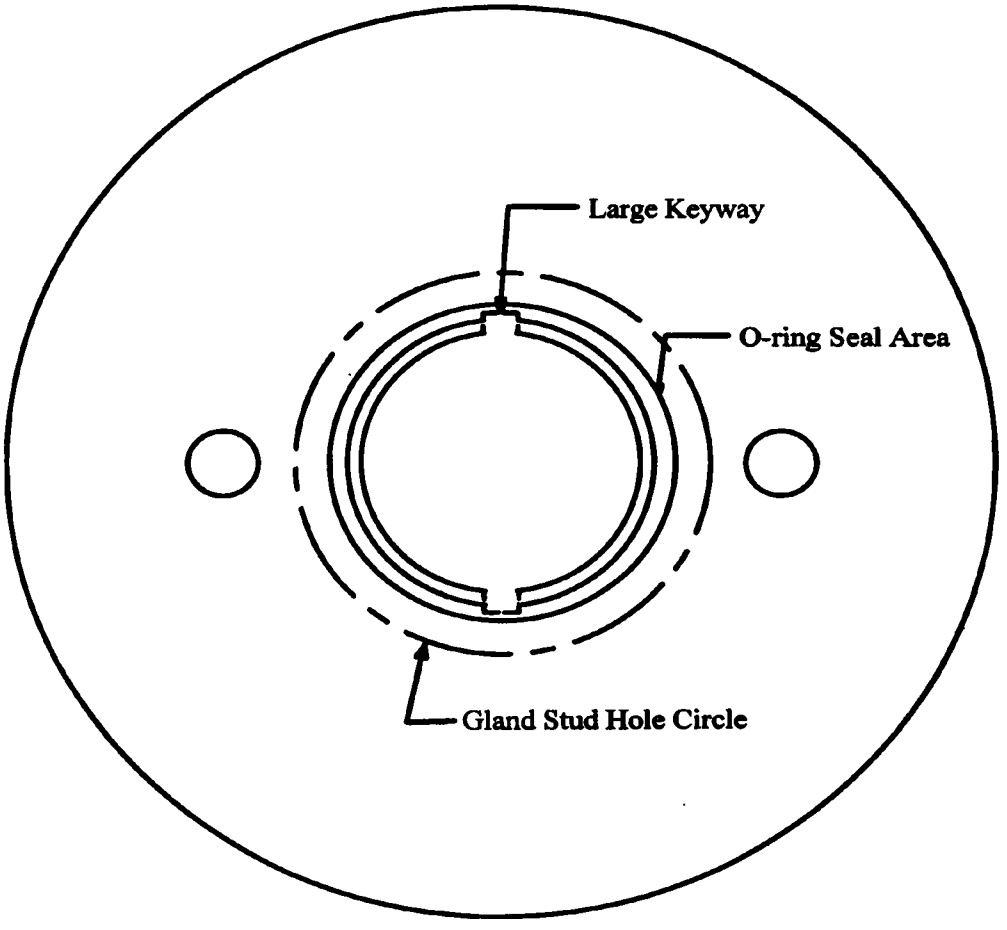
FORWARD FACE



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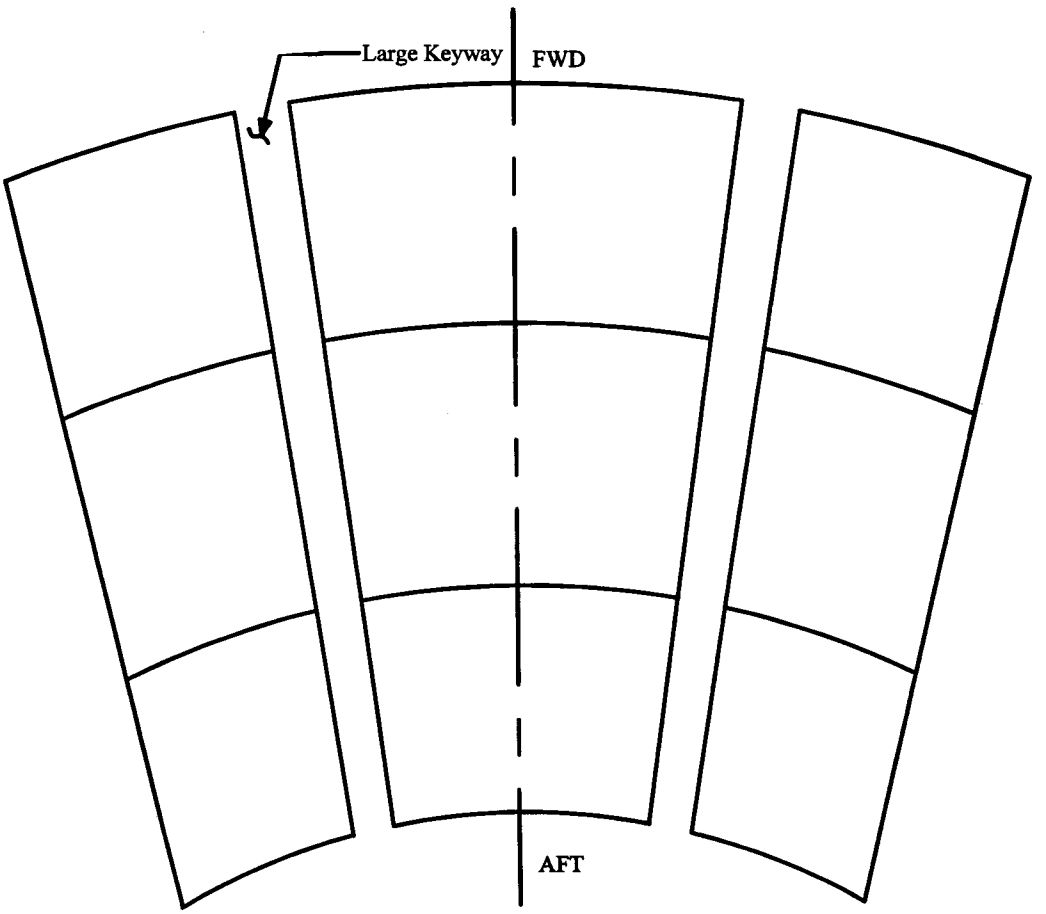
BORE



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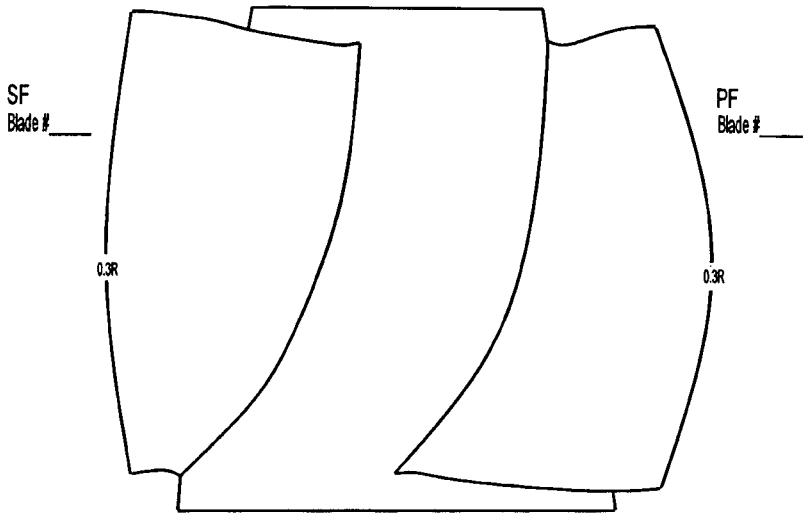
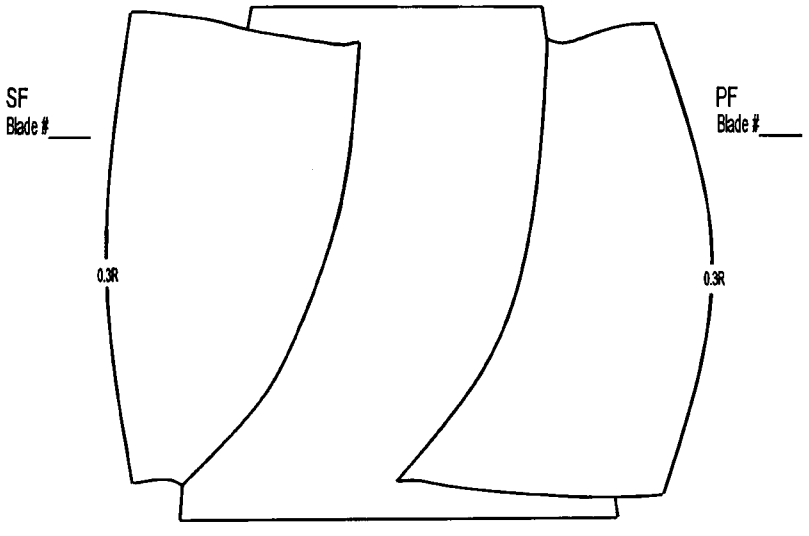
FILLET AREA & HUB O.D.
RH PROPELLER





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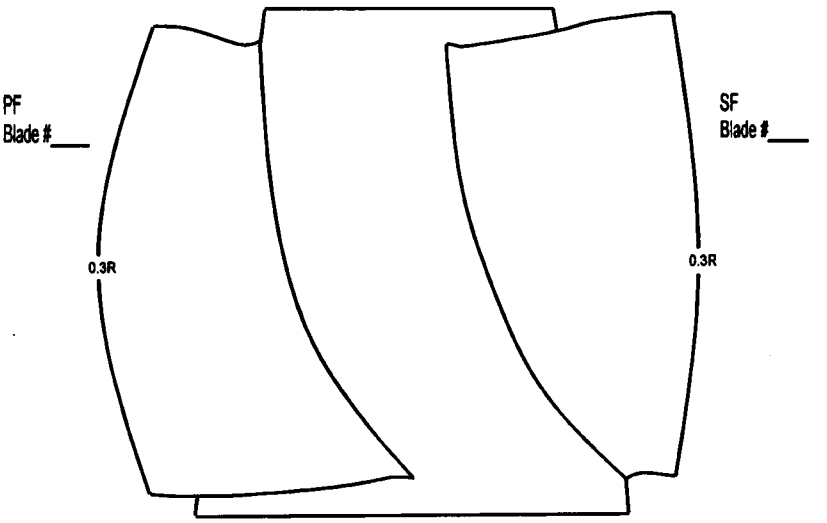
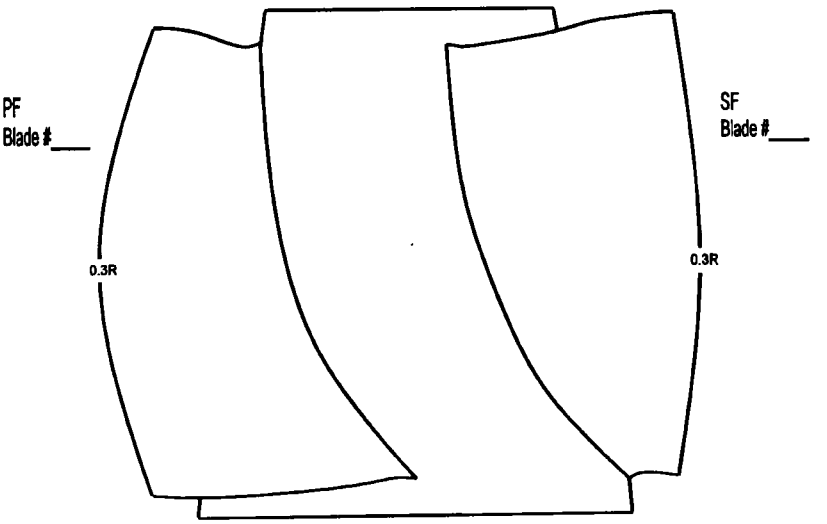
FILLET AREA & HUB O.D.

LH PROPELLER





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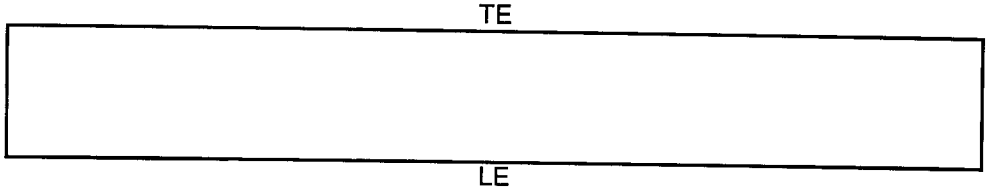
MAF

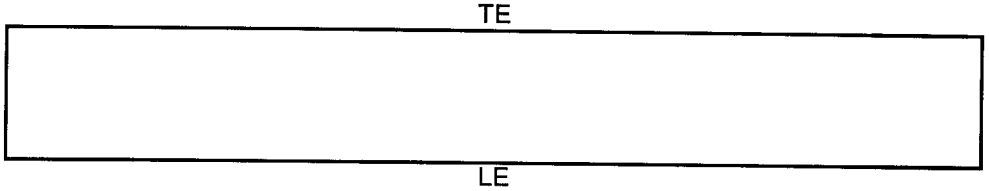
TE



LE

Blade #_____ Blade #_____

TE



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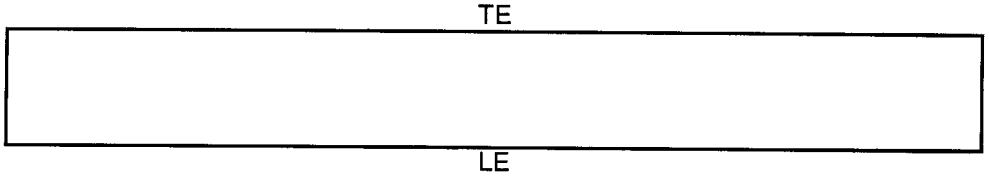
Blade #_____ Blade #_____

TE



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Blade #_____ Blade #_____

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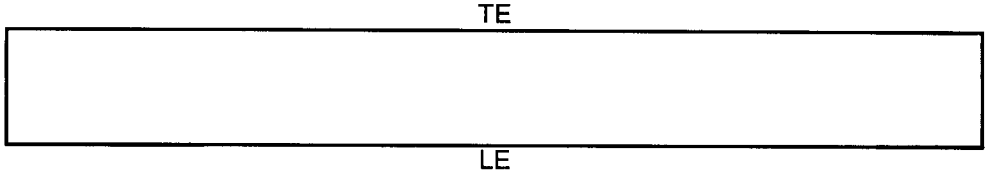


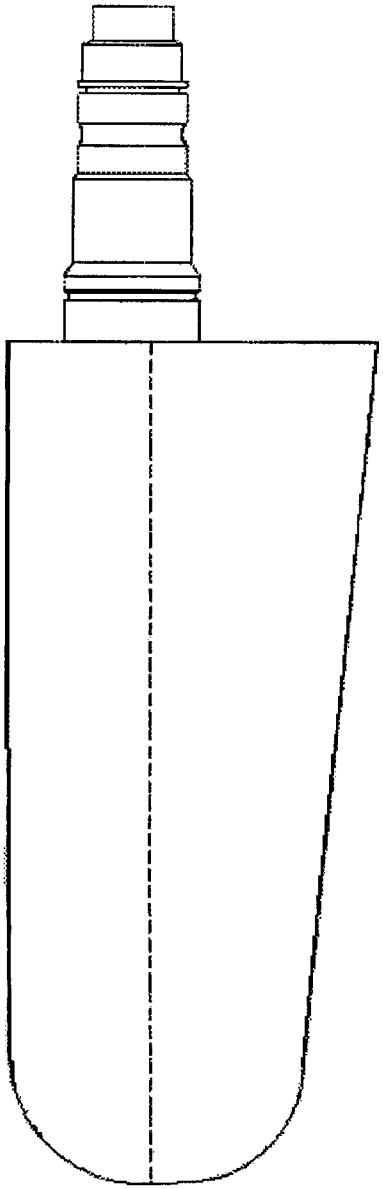
LE

Blade #_____ Blade #_____

☐ INSIDE DIAMETER ☐ OUTSIDE DIAMETER

PROPELLER SERIAL NO.:_____ PAGE _____ OF _____

CYCLOIDAL BLADE



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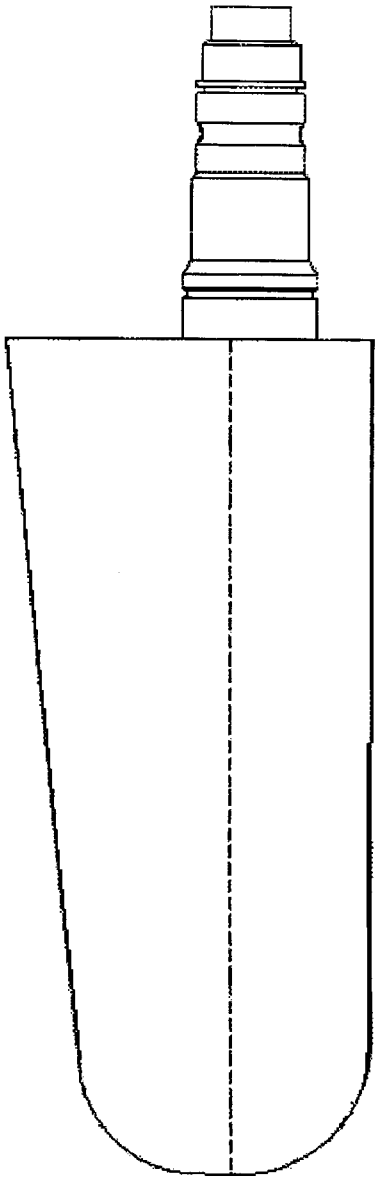

TE

LE

BLADE #_____

INBOARD/PRESSURE FACE

OUTBOARD/SUCTION FACE

PROPELLER SERIAL NO.:_____ PAGE _____ OF _____